

DB Lab Task 13

18p-0126 Ahmad Hasan Syed

Q1/Q2:

```
> db.cities.find({$and: [{population: {$lt:30}}, {population: {$ne: 0}}]}).limit(2).pretty()
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d64f7f4"),
  "name" : "Tanggul",
  "country" : "ID",
  "timezone" : "Asia/Jakarta",
  "population" : 3,
  "location" : {
    "latitude" : -8.1645,
    "longitude" : 113.4525
  }
}
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d653592"),
  "name" : "Ereencav",
  "country" : "MN",
  "timezone" : "Asia/Choibalsan",
  "population" : 23,
  "location" : {
    "longitude" : 49.8807,
    "latitude" : 115.72526
  }
}
>
```

```
}
[> db.cities.find({timezone : "Asia/Jakarta"}).count()
1430
>
```

Q3/Q4:

```
[> db.cities.find({country: "PK", timezone: "Asia/Karachi"}).sort({population: -1}).pretty()
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d655904"),
  "name" : "Karachi",
  "country" : "PK",
  "timezone" : "Asia/Karachi",
  "population" : 11624219,
  "location" : {
    "longitude" : 24.9056,
    "latitude" : 67.0822
  }
}
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d6558dc"),
  "name" : "Lahore",
  "country" : "PK",
  "timezone" : "Asia/Karachi",
  "population" : 6310888,
  "location" : {
    "longitude" : 31.54972,
    "latitude" : 74.34361
  }
}
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d655954"),
  "name" : "Faisalābād",
  "country" : "PK",
  "timezone" : "Asia/Karachi",
  "population" : 2506595,
  "location" : {
    "longitude" : 31.41667,
    "latitude" : 73.08333
  }
}
{
  "_id" : ObjectId("60c61e9fcb0cfb0a5d655875"),
  "name" : "Rāwalpindi",
  "country" : "PK",
  "timezone" : "Asia/Karachi",
  "population" : 1743101,
  "location" : {
    "longitude" : 33.6007,
    "latitude" : 73.0679
  }
}
```

```
[> db.cities.getIndexes()
[ { "v" : 2, "key" : { "_id" : 1 }, "name" : "_id_" } ]
> db.cities.createIndex({population: 1})
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "ok" : 1
}
> db.cities.getIndexes()
[
  {
    "v" : 2,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_"
  },
  {
    "v" : 2,
    "key" : {
      "population" : 1
    },
    "name" : "population_1"
  }
]
> db.cities.dropIndex({population: 1})
{ "nIndexesWas" : 2, "ok" : 1 }
> db.cities.getIndexes()
[ { "v" : 2, "key" : { "_id" : 1 }, "name" : "_id_" } ]
>
```

Q5:

MongoDB Compass - 127.0.0.1:27017/18p0126_6B.cities

Local

4 DBS 4 COLLECTIONS

☆ FAVORITE

HOST
127.0.0.1:27017

CLUSTER
Standalone

EDITION
MongoDB 4.4.5 Community

Filter your data

18p0126_6B

cities

moviepeople_1000

users

> admin

> config

> local

18p0126_6B.cities Documents

DOCUMENTS 99.8k TOTAL SIZE 14.8MB AVG. SIZE 155B INDEXES 1 TOTAL SIZE 888.0KB AVG. SIZE 888.0KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER {timezone: "Europe/Andorra"} OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW {}

Displaying documents 1 - 9 of 9 REFRESH

```
{
  "_id": ObjectId("60c61e9ecb0cfb0a5d64507a"),
  "name": "Canillo",
  "country": "AD",
  "timezone": "Europe/Andorra",
  "population": 3292,
  "location": Object
}
```

```
{
  "_id": ObjectId("60c61e9ecb0cfb0a5d64507b"),
  "name": "Sant Julià de Lòria",
  "country": "AD",
  "timezone": "Europe/Andorra",
  "population": 8022,
  "location": Object
}
```

```
{
  "_id": ObjectId("60c61e9ecb0cfb0a5d64507f"),
  "name": "Pas de la Casa",
  "country": "AD",
  "timezone": "Europe/Andorra",
  "population": 2363,
  "location": Object
}
```

```
{
  "_id": ObjectId("60c61e9ecb0cfb0a5d645080"),
  "name": "Ordino",
  "country": "AD",
  "timezone": "Europe/Andorra",
  "population": 101,
  "location": Object
}
```

MONGOSH BETA

MongoDB Compass - 127.0.0.1:27017/18p0126_6B.cities

Local

4 DBS 4 COLLECTIONS

☆ FAVORITE

HOST
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CLUSTER
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Filter your data

18p0126_6B

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18p0126_6B.cities Documents

18p0126_6B.cities

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Documents Aggregations Schema Explain Plan Indexes Validation

FILTER `{ $and : [{population: { $gt: 12955000 }}, {country: "AR"}]}` OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW { } ☐

Displaying documents 1 - 1 of 1 REFRESH

`{`
 `_id`: ObjectId("60c61e9ecb0cfb0a5d64536e")
 `name`: "Buenos Aires"
 `country`: "AR"
 `timezone`: "America/Argentina/Buenos_Aires"
 `population`: 13076300
 `location`: Object
`}`

MongoDB Compass - 127.0.0.1:27017/18p0126_6B.cities

Local

4 DBS 4 COLLECTIONS

☆ FAVORITE

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Filter your data

18p0126_6B

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18p0126_6B.cities Documents

18p0126_6B.cities

DOCUMENTS 99.8k TOTAL SIZE 14.8MB AVG. SIZE 155B INDEXES 1 TOTAL SIZE 888.0KB AVG. SIZE 888.0KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER `{ "location.latitude": 1.6 }` OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW { } ☐

Displaying documents 1 - 15 of 15 REFRESH

`{`
 `_id`: ObjectId("60c61e9ecb0cfb0a5d64507a")
 `name`: "Canillo"
 `country`: "AD"
 `timezone`: "Europe/Andorra"
 `population`: 3292
 `location`: Object
`}`

`{`
 `_id`: ObjectId("60c61e9fcb0cfb0a5d64c17c")
 `name`: "Tarascon-sur-Ariège"
 `country`: "FR"
 `timezone`: "Europe/Paris"
 `population`: 3644
 `location`: Object
`}`

`{`
 `_id`: ObjectId("60c61e9fcb0cfb0a5d64c1c1")
 `name`: "Sours"
 `country`: "FR"
 `timezone`: "Europe/Paris"
 `population`: 2071
 `location`: Object
`}`

`{`
 `_id`: ObjectId("60c61e9fcb0cfb0a5d64c4da")
 `name`: "Saint-Laurent-Nouan"
 `country`: "FR"
 `timezone`: "Europe/Paris"
 `population`: 3830
 `location`: Object
`}`

> MONGOSH BETA

